

VISION 2020 UPDATE

Bridging From 2016 to 2020 and Beyond

President's Statement

ESF has a remarkable history of responding to emerging environmental challenges while maintaining at its core a focus on environmental science, engineering, design and management; excellence in teaching; and impact through discovery and problem-solving. With this document – bridging the prevailing Vision 2020 strategic plan with the College's next planning steps – we begin the exciting journey of reimagining our future!

At its founding, ESF responded to an urgent need to restore New York State's forest resources and adopt sustainable forest management practices. New York's investment in "its" forestry school was a spectacular success, the results of which can be seen today in forest cover across the state and in diverse leading-edge research and degree programs. As other needs and opportunities arose, ESF adapted to meet them, creating programs in chemistry, environmental engineering, paper and bioprocess engineering, environmental and forest biology, forest and natural resources management, landscape design and preservation, energy research and management, environmental communications and policy, planning, sustainability, and the relationship between environment and human health, to name only a few.

Global environmental changes are spawning new challenges and magnifying old ones. The 21st century will be marked by environmental challenges unprecedented in number, scale and complexity. Some, such as the loss of biodiversity and depletion of resources, will have irreversible consequences for humanity and nature. From deeper understanding of the biotic and abiotic dynamics of the planet's biosphere to sustainable alternatives to meet human demands for energy, food, materials, industrial processes and urban designs, the great needs of society have aligned with the strengths of ESF.

To make its greatest contributions, ESF is once again called upon to adapt. The College, already a model of collaboration, will extend its reach by establishing even more partnerships in and beyond academia. It will be a leader in broadening participation in science, technology, engineering and math (STEM) fields by making its campus and programs as welcoming as possible to all who share its desire to create a better future. It will build upon its tradition of working across disciplines to become a model for confronting grand environmental challenges by leading scientific and engineering innovation, while engaging ethical, societal and human dimensions.

ESF also recognizes that the lands it resides on are the traditional territory of the Haudenosaunee peoples. That growing realization and internalization gives us pause and transforms us in ways still not yet fully explored or explained. Thus, we also commit to something different—something a list of quantifiable targets cannot always fully express.

- We commit to be responsible caretakers, and responsible neighbors, and to be co-inhabitants of these lands and those far beyond, and across, our planet Earth.
- We commit to remember and learn from those who came before us—to learn from other species with whom we share (and to whom we owe) our existence.
- We commit to take pause and listen, to think about what world we would like to leave for those who come after us—to seek consent, to act bravely and to tread more lightly.

We hope our commitment inspires our own community and others to take the long-term view and act as if we were all indigenous to this planet, our home—as if we intended to stay, and co-exist here, together.

We will **sustain**, **seize** and **seed** to create ESF's next century of success: **sustaining** existing strengths, **seizing** opportunities as they arise and sowing the **seeds** of future opportunities. We will emphasize those things that make ESF uniquely excellent, and increase the College's national visibility to attract new partners and investors who share our passion for creating a better tomorrow, once again adapting to expand ESF's relevance and impact.

Quentin Wheeler
President

From the ESF Strategic Planning Steering Committee

ESF is an energetic, vibrant and dynamic institution – consider that at one time we were only a forestry College. Today we are much, much more. We are a leading environmental college, poised to provide environmental solutions and effect changes through teaching and research as rapidly as today’s world requires. Finances, societal interests and needs, and environmental issues drive our need to consider ESF’s role and responsibilities in our second century.

The College’s first strategic plan, in 2003, benchmarked who we were (are) and who we wanted to be. This thinking was encapsulated in *Vision 2020*. In the fall of 2015, it was determined that *Vision 2020* needed to be updated to provide a bridge from the present to 2020, when a new strategic plan will take its place.

Primary ideas for this *Vision 2020 Update* were gathered from an array of sources, including an accounting of accomplishments with reference to *Vision 2020* goals. Additionally, a variety of innovative strategic planning events and processes were undertaken in 2014-2015 that produced new, aspirational aspects of ESF’s vision, mission, values, goals, academic direction and connections to recent SUNY initiatives. These, too, were used in the *Update*.

Herein are the results: a renewed portrayal of ESF – who we are today, who we aspire to be in the near future and what we want to achieve in between.

Our *Vision 2020 Update* is:

- a visioning document with some classic elements of a strategic plan, including College-level statements on: vision and mission; goals, subgoals, objectives and targets; and monitoring/evaluation
- a portrayal of “who we are,” supported by descriptions of recent representative accomplishments by the College community aimed at meeting *Vision 2020* goals
- an evolving statement of “who we want to be,” designed around an expanded treatise on academic direction for the whole College, and an emphasis on what we aim to “achieve” – statements on “what to do” are intentionally left to units, departments, partners and other stakeholders as they continue to work toward our collective vision
- a “bridging” document meant to carry the institution to the next full effort in strategic planning set to begin in 2017-2018; this *Vision 2020 Update* “bridge” features new aspects of community-based planning work from the past few years and new SUNY efforts in planning and connects them to the original 2003 version of *Vision 2020*
- an impetus and platform for continued discussion about ESF’s future; the *Vision 2020 Update* is not about resolving all that ESF is and can be – it is a recognition of the breadth of work at ESF,

both ongoing and possible, and a framework for conversations and considerations in which we need to engage over the next few years.

This update is meant to stimulate thoughts, reflection and discussion as a means to engage the ESF community and its stakeholders in preparation for a new strategic plan that will replace this *Vision 2020 Update* in 2020. We expect that much discussion – and wrestling of ideas about what ESF is – will occur over the next few years as a result of this *Update*. Excellent. Have at it, engage and get prepared for ESF's future.

Respectfully,

The ESF Strategic Planning Steering Committee

May 2016

Vision and Mission

ESF VISION

A better world through environmental discovery

Our vision is a world filled with natural and designed environments that are diverse, resilient and responsive in the challenging context of environmental change. ESF will create new opportunities for sustaining both human prosperity and the enduring integrity of the natural world as we work to achieve this vision.

ESF MISSION

To advance knowledge and skills and to promote the leadership necessary for the stewardship of both the natural and designed environments

ESF's mission includes outstanding teaching, research, scholarship and outreach programs focused on building sustainable communities and environments. ESF develops creative and effective solutions to environmental challenges and natural resource utilization through discovery, design, management, practice and the integration of social, economic, technological and environmental systems. We educate and inspire environmental leaders and provide a model for a new environmentalism that is science based, values informed and inclusive.

ESF Values

The College of Environmental Science and Forestry embraces the public trust placed in it by the people of New York state and accepts the responsibility to advance knowledge in our specialized areas of study. We will fulfill this duty consistent with our core values of discovery, community and service.

As an academic institution, ESF is committed to the process of discovery, the dissemination of knowledge and the discipline required of scholarship. Embedded in these values are innovation and a dedication to continuous learning. Informed by science and guided by effective design and planning, the faculty, staff and students at ESF are committed to sustainable practices and policy alternatives that will both protect the environment and meet the needs of a global society.

As a community, ESF is committed to the highest standards of personal and professional behavior. We celebrate the diverse backgrounds, cultures and perspectives represented in our community. We believe that respect for one's self and others leads to a community characterized by integrity and honor. We are attentive to the health, safety and well-being of our community, realizing our greatest assets are our faculty, staff and students. Through this concern and compassion for others, we continually improve and truly make a difference.

As part of the State University of New York, our service to the community extends beyond our campus. We are committed to sharing our discoveries and knowledge with public and private constituencies, organizations and citizens throughout our state, our nation and, indeed, our world.

We, the faculty, staff and students at ESF, see our foundation in the values of discovery, community and service. These values inspire us to do our best as we pursue our mission.

In explicitly enumerating a set of institutional values, ESF reminds itself and informs the world of those things that guide the College's planning and the practices it embraces as fundamental to what ESF is. The College phrases these organizational values as commitments that can be understood to describe the essence of ESF.

Academically Free: ESF values the academic freedom of inquiry as essential to the mission of ESF

Agile: ESF is able and willing to adapt to unexpected needs and opportunities

Collaborative: ESF is eager to work across disciplines, with other organizations, and with New York state communities to amplify what it can accomplish

Curious: ESF is driven by curiosity to explore and understand the natural world for pure knowledge, understanding and joy

Diverse and Inclusive: ESF believes that all people have much to contribute and that all perspectives deserve respect

Entrepreneurial: ESF is ever vigilant in a search for ways in which to make the most of every resource, idea and opportunity

Impactful: ESF makes the greatest positive contribution and impact possible whether on the environment, the individual, society or ideas

Integrity: ESF's actions are guided by strong principles and adherence to moral and ethical codes

Commitment to Sustainability

Sustainability is central to ESF's mission. This, as well as an evolving understanding of its many dimensions, causes the College to continuously undertake a full-scale evaluation of its sustainability commitment.

In 2011, ESF framed its re-accreditation assessment around sustainability. The College proclaimed that "Sustainability begins with an obligation to meet present needs without compromising the ability of future generations to meet their needs through:

- the understanding of basic functions of natural and social systems;
- acknowledging and quantifying the limitations of nature's capacity; and
- developing solutions through the integration of social, economic, technological, and environmental systems."

This refers to the long-term viability of a system with regard to economic, social and environmental goals and constraints.

One of ESF's important efforts remains quantifying its commitments and actions over time, and benchmarking against other colleges and universities to stay informed and to lead with best practices. ESF commits to an annual cycle of assessment, planning, and implementation, guided by the industry-standard for measuring campus sustainability: STARS—Sustainability Tracking and Rating System. By 2020, ESF will move from its present Gold STARS rating to Platinum status – the highest level – and, as a component of this, achieve carbon neutrality.

ESF also recognizes that sustainability uniquely involves linking academic and physical operations of the institution for the purpose of mutually beneficial interactions. The campus as a "living laboratory" is an example of this; as such, the College will improve teaching and research by opening up operations and processes. Ultimately, this will result in the intellectual might of the College community continuously improving the physical and social operations of the College, including reducing costs.

Academic Directions

Meeting environmental challenges frames the context of ESF's educational mission. The College educates the next generation of environmental thinkers, decision makers and problem solvers. Today's environmental issues are inherently complex and must consider a variety of perspectives and competing interests. In *Vision 2020*, four themes — Applied Ecology and Conservation Biology; Renewable Materials, Energy and Biotechnology; Sustainable Systems and Communities; and Environmental and Natural Resources Information Systems — provided a context to integrate and synthesize the cultural, natural and industrial perspectives embracing all of ESF's teaching, research and service programs. This context still applies today but has grown in depth and complexity. ESF has responded, building new education and research programs, and supporting and being supported by staff and faculty in that work. Recently, ESF's areas of expertise have been regrouped as eight integrative agenda items, or focal areas — these defined focal areas are intended to highlight and foster work by transdisciplinary teams that will generate discoveries related to, and addressing solutions for, the environmental challenges facing ESF, society and the biosphere.

Clear bridging connections exist between the *Vision 2020* "Academic Directions" and the new integrative agenda items which encompass the variety of disciplines and perspectives of faculty and staff at ESF. While ESF is more than the sums of these parts, it is this collective of directions, questions and items that capture much of what ESF is and aspires to be. Within this framework, ESF's academic and support programs bring a multidisciplinary and collaborative approach that builds on past strengths and forges new ones. ESF's dynamic array of programs, with a foundation of academic excellence, offers solutions to the world's environmental problems.

THE "COMPASS POINTS" – THEMATIC LEGACY OF *VISION 2020*

Applied Ecology and Conservation Biology

The field of Applied Ecology and Conservation Biology explores how to maintain healthy, functional ecosystems and conserve the earth's rich biological diversity. Its purpose is to identify long-term measures to prevent degradation of ecosystem function and loss of biological diversity while accommodating the ever-increasing needs of human society. Conservation biology applies scientific knowledge toward maintaining and restoring the earth's biological diversity. Conserving diversity at all levels of an ecosystem is both paramount and increasingly difficult. Conservation biology integrates biological perspectives with social, economic and political ones to maintain this delicate balance.

Renewable Materials, Energy and Biotechnology

The wise use of renewable materials is key to both economic and environmental well-being. Developing strategies to reduce reliance on fossil fuels as an energy source is a vital challenge for the 21st century. Engineering of novel processes and materials using renewable resources and biotechnology is a key part of ESF's strategy to contribute to meeting this challenge. It is essential to achieving environmental improvement because it creates new ways to use natural processes for human benefit and can be directed toward the cleansing of contaminated habitats.

Sustainable Systems and Communities

The concept of sustainable development was defined by the World Commission on Environment and Development as a form of progress “that meets the needs of the present without compromising the ability of future generations to meet their own needs.” At ESF, successful design and implementation of sustainable systems and communities integrate concerns for the natural environment with concerns for quality of human life and communities. Through research and education, College faculty and students explore the interactions of biological and human systems for the maintenance and long-term improvement of both.

Environmental and Natural Resources Information Systems

Scientific discovery begins with curiosity and a question that needs to be answered. From there, one collects objective data and then uses or analyzes that information. Finally, the outcome or result of that methodological sequence is communicated. Through data acquisition, analysis, modeling and simulation, and interpretation, ESF brings environmental and natural resources information systems to the classroom as well as to research and public service efforts. Examples include wildlife monitoring, ecosystems and watershed modeling, GIS and remote sensing analysis, urban lead and acid rain studies, and the Northern Forests Initiative.

ENVIRONMENTAL CHALLENGES: AN INTEGRATIVE APPROACH

ESF will continue to pursue many areas of research, scholarship, management, science, design, and engineering. It is planned that the following focal areas of multi- and trans-disciplinary work define those areas for which integration of expertise across multiple disciplines will be called upon and met at ESF. These focal areas are a basis for creating an ESF integrative agenda that defines and foreshadows trans-disciplinary academic teams:

- **Earth, Air, Water and Life**
Core strengths in STEM fields underpin each department and academic program at ESF. From the fundamental physical and chemical properties of each of the earth’s terrestrial, marine and atmospheric systems to the unique ways in which life has adapted to the biosphere, ESF’s programs bridge disciplines to consider the interconnections between and overarching each.
- **Biodiversity, Natural History and Biomimicry**
ESF’s long-standing natural history tradition is the foundation for nature-inspired innovations in sustainable design, materials, processes, policies, and ideas developed by the College’s research and educational activities. Our strength in sustainability problem solving makes the College uniquely capable of a leadership role in this emerging area.
- **Environmental Communications, Values, Equity and Justice**
Understanding the many ways that communication, broadly defined, intersects environmental affairs is at the core of ESF’s values and mission. It is through all methods of communication that humans determine their relationship with the rest of the planet and with each other. Various academic programs and institutional initiatives address the communicative dynamics of behaviors, attitudes, values, perceptions and ideologies and the ability of participants to communicate and use information effectively, strategically and ethically.
- **Environmental and Natural Resource Planning and Management**
From its founding, ESF has been committed to preparing graduates as teachers, researchers, planners, managers and policy makers. These dedicated alumni have contributed, and will

continue to do so throughout their careers, to viable and sustainable management of the earth's natural resources. Examples of their work can be found regionally, nationally, and worldwide, including integrating natural and cultural communities, leading the transition from fossil-based to renewable energy systems and addressing the unique environmental, legal, social and cultural components of the resource systems to be managed.

- **Natural Products and Sustainable Energy and Materials**
ESF will pursue a leadership role in the development of natural products, materials and fuels, highlighting the utility of wood and cellulose-based feedstocks, bioactive chemicals or other useful biologically derived chemicals and materials and pursuing inquiry into their underlying materials science and potential industrial application. ESF's long history of research in polymer chemistry, chemical ecology, paper science, wood science and bioprocess engineering places us in a unique position to capitalize on these emerging disciplinary areas.
 - **Social, Economic and Ecological Systems**
Understanding our world as a set of interconnected and interdependent systems is essential to identifying and addressing the complex environmental problems facing humankind today and in the future. ESF's expertise in environmentally focused social sciences highlights the nexus of sociocultural, political and economic systems with local, regional and global ecologies and ecosystems.
 - **Environment, Human Health and Quality of Life**
The role of the environment in influencing and contributing to human health and quality of life is one of growing importance and concern. ESF's programs in the science of the environment, including the physical and chemical properties of ground and surface water, soils, biotic systems of all kinds, visual and acoustic environments, and air and atmospheric systems all contribute to an emerging and growing focus on the intersection of human health and environmental quality. Environmental justice is an aspect of inquiry and learning that brings social and political science to bear.
 - **Ecological Design and Engineering**
The sustainable design and engineering of the built environment, including construction and urban design as well as the restoration of natural environments, relies on a deep understanding of ecology and ecological systems and principles. Through the incorporation of these principles, as well as an understanding of associated social, cultural and political systems, ESF's programs focus on the design and engineering of environments where humans are intrinsically seen as integral parts of local and regional ecologies.
-

Vision 2020 – Goals Assessment

Vision 2020 had at its core a commitment for ESF to achieve seven goals as defined by an accompanying set of 75 targets (targets are tantamount to subgoals or objectives that are strategic definitions and directions of how a goal was to be achieved). Each of the seven original *Vision 2020* goals are presented verbatim as in 2003 in the following pages with their original written descriptions (“quoted,” italicized text after each goal, most of it directly from the 2003 *Vision 2020* document). As part of this *Update*, each of the 75 targets was assessed for level of accomplishment using a two-category system: 1) meeting/ approaching; or 2) renewed/ongoing, primarily based on published ESF reports from the past 5 years (e.g., Middle States Accreditation, SUNY Excels) and new, *Update*-related unit and department reports. Additionally, a third category was assigned to any new targets added to a goal: new, as developed in process of updating *Vision 2020*.

Connections between *Vision 2020* goals and targets and the new SUNY Excels state-level strategic planning were made by linking (parenthetically) select targets with one or more of the SUNY Excels goals (A for Access, C for Completion, S for Success, I for Inquiry and E for Engagement). These connections are from the 2015-2016 ESF SUNY Excels plan, and are important because of heightened attention from SUNY on these targets for performance and monitoring.

A set of recent (last 5 years), institutional accomplishments and initiatives are presented with each goal to highlight ESF’s work inside and outside the institution that will carry on until 2020, and likely beyond. These statements are intended to define in part “who we are at ESF,” and “who we will be” over the short term.

GOAL 1: Enrich academic excellence in both undergraduate and graduate education

“Meeting environmental challenges frames the context of ESF’s educational mission. The college educates and trains undergraduate and graduate students as the next generation of environmental thinkers, decision makers and problem solvers.

Today’s environmental issues are inherently complex and must consider a variety of perspectives and competing interests. In 2020, four themes — Applied Ecology and Conservation Biology; Renewable Materials, Energy and Biotechnology; Sustainable Systems and Communities; and Environmental and Natural Resources Information Systems — provide a context to integrate and synthesize the cultural, natural and industrial perspectives embracing all of ESF’s academic, research and service programs. Within this framework, and with new perspectives on integrative areas and transdisciplinary work, ESF’s academic programs bring a multidisciplinary and collaborative approach that builds on past strengths and forges new ones. ESF’s dynamic array of programs, with a foundation of academic excellence, offers solutions to the world’s environmental problems – now, in 2020, and beyond.”

Assessment of *Vision 2020* targets

Meeting/Approaching:

- Five programs to be ranked in the top five of their kind nationally
- Add new academic programs (A)
- Add summer bridge programs to assist entering freshmen in meeting math and science requirements (A, C)
- Implement outcomes-based learning (S)
- Increase collaborative, multidisciplinary and multi-institutional programs (E)
- Achieve additional academic program certification, accreditation or validation
- Strategically recruit and hire at least eight new exceptional faculty members (A)
- Strengthen the caliber of our freshmen class so that 90 percent are admitted under "most selective" or "highly selective" criteria (A)
- Strengthen support services to enhance academic excellence (A, C, S)

Renewed/Ongoing:

- Achieve distinction in the areas of distance learning, information technology, and classroom technology and media
- Achieve a diverse student body such that 15 percent of graduating students are from underrepresented populations (A)

New:

- Develop an intentionally designed general education experience
- Develop novel coursework where diversity is explored and emphasized in different contexts, while engaging in thoughtful and respectful discussions surrounding diversity within all coursework

- Develop programs specifically designed to increase diversity of students pursuing education and careers in STEM-related fields
- Ensure that graduate students are provided both focused learning and flexibility in tailored learning to complete their degrees
- Expand student, staff and faculty knowledge of techniques and processes associated with existing and new technologies, including digital communications and literacy

Recent Accomplishments/Initiatives

New academic programs have been/are being developed, e.g., Biochemistry, Bioprocess Engineering, Environmental Health, Renewable Materials Science, and Sustainable Energy Management programs, that respond to and meet societal needs and student interests.

A variety of academic options have been expanded and created, including the development of two dozen minors, with each department housing two or more minors. Additionally, the Honors Program has grown significantly, with 25-35 students graduating each year.

An independent “virtual library” was established on campus with resources that include online catalog, databases and associated support system.

Modern scholarly communication was improved by launching an institutional repository. *Digital Commons @ ESF* is a secure location to showcase the scholarly output of the ESF academic community. From student work to faculty publications to media and archival material, ESF has steadily built content that is available and findable.

ESF created and formalized the SEEDS academic support program that provides needed coaching and mentoring to academically at-risk students to support their academic pursuits. (Approximately 314 students have participated in the SEEDS program over the past 5 years).

CSTEP (Collegiate Science and Technology Entry Program) has been at ESF for 11 years, and the grant was recently renewed through 2020. This New York State Department of Education program works to increase the number of historically underrepresented, economically disadvantaged college students who complete pre-professional or professional undergraduate or graduate programs in these fields. The major aspects of this enrichment program are academic support, faculty mentoring, skill building, professional development and community service.

The Writing Resource Center has grown from serving a handful of students just a few years ago to serving hundreds each year. There were 788 appointments made in the academic year 2014-2015, up from 357 appointments the previous year.

ESF has added six new revenue-generating Master of Professional Studies graduate programs over the past 5 years, one modeled on the “Professional Science Masters” typology developed by the Council of Graduate Schools, and the remainder conforming to the Peace Corps Masters International program guidelines.

GOAL 2: Provide an outstanding student experience

“Students in the year 2020 will be more numerous and more diverse. They will arrive at college with widely varied racial and ethnic backgrounds, family situations, values and goals, and personal and professional destinations. They may study on campus or at a remote location. Academic programs will need to accommodate this diversity. For offices providing enrichment and support services, adapting to these new clients and their expectations will be critical.

Excellence in academic programs provided by top quality faculty is complemented at ESF by excellence in support services and enrichment programs outside the classroom. Stimulating and responsive campus programs advance personal, social and professional development.”

Assessment of Vision 2020 Targets

Meeting/Approaching:

- Provide a safe and supportive learning environment (C)
- Strengthen faculty/student interaction (C)
- Add summer eco-camps to expose underprivileged children in the Syracuse area to science/environmental education (A)
- Further develop programs designed to assist students at risk (C)
- Increase experiential learning opportunities (S)
- Provide adequate scholarship dollars to ensure successful academic performance (A, C)

Renewed/Ongoing:

- Define and facilitate a set of skills and knowledge all ESF students will have upon graduation, such as personal responsibility, citizenship, appreciation of diversity, leadership and information technology (S)
- Achieve the highest graduation rates in SUNY (80 percent)
- Balance the need for and use of technology with the importance and benefits of personal interaction
- Fully develop regional and international learning experiences (S)

New:

- Create new opportunities to explore and experience diversity, to make ESF an inclusive and supportive environment for all members of the community
- Determine the appropriate level of financial support to achieve the College’s recruitment and retention goals
- Develop further general leadership trainings for more students by expanding upon the current *Emerging Leaders* program, student organization trainings, Orientation Leader program and other leadership programs on campus
- Create a plan for community service programming and the reporting of engagement experiences at ESF

- Continue to develop further key goals and signature programs for all first-year and transfer students at ESF so there is a noteworthy, impactful and smooth transition for new ESF students
- Ensure that graduate students are provided satisfactory expectations and responsibilities, funding opportunities and suitable working spaces necessary to complete their degrees
- Create opportunities for international and national travel programs similar to the requirement used by the successful off-campus program in Landscape Architecture
- Create programs (e.g., ESF Graduate Student Young Professionals Program) to enhance the graduate student experience
- Expand interdisciplinary research opportunities for undergraduate and graduate students

Recent Accomplishments/Initiatives

In 2011, the College opened Centennial Hall as the first dedicated residence hall for ESF students. It is an environmentally friendly “green” building that was awarded Gold certification by the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) program. An addition to the building was constructed in 2014 to accommodate high student demand. The building currently houses approximately 550 ESF first-year and upper-class students.

International and domestic opportunities are in place or under development across departments to allow students to study outside the classroom (Wild Rockies, Study Abroad, FEMA Corps).

All departments offer several experiential learning opportunities, including through coursework, workshops and seminars. College (“forest”) properties – particularly the Dubuar Forest at The Ranger School/Wanakena Campus, Cranberry Lake Biological Station, Huntington Wildlife Forest at the Newcomb Campus, and Heiberg Forest – provide a world-class platform for ESF students to pursue hands-on field research and learning and expand opportunities for networking with other academic and research institutions. These educational experiences lead to new discoveries, knowledge and career pathways for students.

Cellular communications have been upgraded across the College properties, with plans to secure a telecommunications tower at The Ranger School.

Scholarship support provided by ESF College Foundation to students across all programs increased over 200 percent in the last 5 years, from a total of \$363,780 available in fiscal year 2010-2011 to a total of \$1,098,425 in fiscal year 2015-2016.

University Police are partnering with the Athletics Office to assign individual officers as mentors to individual teams, with particular connection to Title IX work. The intent with this mentoring initiative is to strengthen relationships between University Police and student populations and better monitor campus “climate.”

More than 150 ESF students participate in intercollegiate athletics each year, representing approximately 9 percent of the full-time undergraduate enrollment. Goals for the Office of Athletics have been accomplished without having any ESF-operated athletic fields or facilities for student use (all facilities are rented). The program functions entirely with part-time coaches and administrators and provides 87 percent of its annual expenses through an athletics fee approved by an ESF student referendum, implemented in 2010-2011.

Intercollegiate athletics have helped ESF achieve its student recruitment goals. Athletic scholarships are not provided and criteria for College admission are the same for student-athletes, but athletics impacts

College choice decisions for many applicants. More than 450 of ESF's 1,600 applicants for freshman admissions for Fall 2015 (28 percent) participated in high school-level athletics.

Faculty advising and other support of student clubs across departments has increased faculty-student interactions. ESF has more than 30 recognized clubs.

ESF enrolled a record 1,733 undergraduate students in Fall 2015, with 62 percent awarded institutional scholarships and approximately 80 percent awarded financial aid.

Careful management of student loan awards and loan counseling have resulted in a 3-year student loan default rate for ESF graduates that is under 4 percent, while the average rate for SUNY campuses is over 7 percent (2011 data).

An online alcohol/other drug, sexual violence prevention and healthy relationship program, called *Think About It*, was successfully implemented with first-year and new transfer students. Average annual compliance with this program is 95.7 percent.

A new online literary journal, *Unearthed*, has been created. *Unearthed* solicits and publishes ESF undergraduate student videos, artwork, essays, poems and short stories.

The Rosen Undergraduate Fellowship and the Fink Career Fellowship have together, since 2013, supported over 50 students in their domestic/international experiences through their work via internships, courses, conferences and symposia.

GOAL 3: Be the “go to” institution with a strong and visible reputation

“College reputations are built on a complex set of relationships. Programs offered, cost, and location combine with such intangible elements as history, tradition and public perception. With increased competition for students, collaborators and donors, an effective public presence is critical to ESF’s success.

In the year 2020, ESF’s name is immediately recognized and associated with quality and achievement. The college is established as the authority and source for environmental news among reporters. Business, government and agency leaders regularly seek to consult with ESF faculty and staff, and college scientists are sought-after research collaborators.”

Assessment of Vision 2020 Targets

Meeting/Approaching:

- Create brand-name recognition and attraction
- Target high schools to communicate our excellence
- Establish strength in marketing and external relations
- Establish visible research initiatives
- Enhance College recognition programs, such as the Feinstone Environmental Awards, to garner additional publicity and respect

Renewed/Ongoing:

- Enhance our web-based presence
- Become the authority and source for environmental news
- Establish a multi-institutional national environmental academy (E)
- Pursue College programs and activities to include student outreach and teacher development in multiple off-site locations including international arenas (E)
- Be a major player for environmental consultation by business, government, grantmakers and the like (E)
- Make the Feinstone Award the most respected and well-known recognition program of its type

Recent Accomplishments/Initiatives

ESF College rankings have improved dramatically since 2010, with ESF ranked #30 among all public universities by U.S. News in 2014-15 (see Forbes, US News, Washington Monthly, etc.).

Total ESF enrollment has increased by 22 percent since 2005 (1,856 to 2,266 matriculated students).

Freshman SAT scores have increased by 44 points (1169 to 1213) since 2010, and out-of-state enrollment has grown from 17 to 24 percent of our entering class.

Communications Office placements in national and statewide media have increased from 372 in 2009-10 to 951 in 2014-15 (+156 percent).

The ESF website attracts approximately 1.2 million unique visitors per year (ESF data).

The College will contact more than 140,000 high school students through direct mail advertising in 2015-16, a 24 percent increase from 2010-11 levels (ESF data).

ESF's *Going Green* television segments reach an estimated 1.72 million viewers each week through a partnership established with Time Warner Cable. These segments provide 16 minutes of television exposure weekly across upstate New York, at no cost to ESF beyond production time.

ESF's "Top 10 New Species" list has resulted in hundreds of media placements and more than 800,000 unique visitors to the ESF website over the past 2 years.

Faculty research initiatives have been promoted in the media to increase College visibility. Prominent examples include Galapagos tortoises, American chestnut, and biomass energy research.

A marketing communications study is being completed that aims to further define ESF's market position to better inspire prospective students, donors, foundations and other key audiences through improved messaging.

The Office of Communications will continue to explore unique opportunities to position the College as a "player" in state, national and international communications, interactions and partnerships in the areas of sustainability and the environment. We are exploring the potential to establish a new national poll covering current environmental issues. We will also work to publicize the activities of ESF's Center for a New American Environmentalism to further ESF's image as a "thought leader."

ESF's First Destination Survey (formerly the Graduating Student Survey) provides a snapshot of the landing point of recent graduates (defined as those having graduated within the previous 12-month period). In 2014, students reported the highest overall placement rate in history, 91.1 percent, and the highest employment in a position related to their ESF major, with 89.1 percent.

GOAL 4: Become financially secure and independent

“A strong fund-raising program — incorporating alumni giving, support from private foundations, corporate donations — and a large endowment and asset source can mean the difference between excellence and mediocrity.

In 2020, ESF capitalizes on its strong position with alumni and corporate collaborators, and the public’s perception of the importance of its mission. The college’s large and growing endowment and asset bank, as well as sufficient operating funds, allow ESF to recruit and retain top-caliber students and faculty, enhance and develop academic programs, and protect itself against the vagaries of state funding.”

Assessment of Vision 2020 Targets

Meeting/Approaching:

- Strengthen and diversify the endowment and research dollar sources
- Create \$100 million in ESF College Foundation assets (“asset” was originally, incorrectly referred to as “endowment” in *Vision 2020*) (in 2020 dollars) to include increased alumni, corporate, and foundation giving
- Establish faculty-specific scholarships and target unit-specific foundations and other previously untapped entities for support (E)
- Develop a web-based donation program to solicit and accept gifts in support of ESF programs
- Through the ESF College Foundation, acquire properties as investments and/or revenue-generating opportunities
- Create a full-service development organization supported by the endowment of the Foundation (E)

Renewed/Ongoing:

- Achieve \$30 million in annual research monies through diversified funding sources
- Establish eight endowed faculty chairs (E)
- Improve the royalty stream from author-/principal investor-derived intellectual property (I)
- Launch an e-commerce initiative to promote intellectual capital

New:

- Complete a “close-the-gap” plan focusing on short-term actions, reallocations, and investments to increase revenue generation over 1 to 3 years while aligning with the long-term goal to eliminate the College’s structural budget deficit
- Increase student enrollment with an emphasis on out-of-state undergraduate students, on-line students and self-funded graduate students
- Increase the number of development staff and work toward creating a more robust institutional advancement structure to provide private funding support to the College
- Design and launch a new fundraising campaign to support new and existing academic initiatives that serve to differentiate ESF from its peers and increase visibility of the College

- Fund, design and construct an ESF dining hall to help lower student meal plan costs and generate revenue
- Facilitate an ownership transfer of the northern properties held in trust by Syracuse University to the ESF College Foundation with the goal of enhancing property revenue generation to provide support for remote facilities and other initiatives
- Hire a chief information officer to oversee the implementation of in-house IT services ultimately resulting in cost savings by eliminating the purchase of IT services from Syracuse University
- Continue to pursue SUNY2020 competitive funding through innovative partnerships that directly fund needed capital projects
- Pursue funding available through the Regional Economic Development Councils
- Grow sponsored research revenue from a baseline of \$16 million in fiscal year 2014-2015 to \$20 million in fiscal year 2020-2021

Recent Accomplishments/Initiatives

In December 2014, the ESF College Foundation completed the College's first comprehensive fundraising campaign, *The Centennial Campaign*, for ESF. The campaign exceeded its \$20 million goal by \$1.5 million, 18 months ahead of schedule. Annual giving to the College Foundation has risen from approximately \$1.3 million in 2002 to \$3.5 million in 2015. Growth in giving has been realized from non-alumni individuals, private foundations and corporations, reaching 52 percent in the recent fundraising campaign.

As of June 2015, College Foundation assets equaled \$71.4 million compared to total assets of \$6.3 million in June 2002. The Foundation continues to track ahead of schedule to meet the 2020 asset goal of \$100 million.

The ESF College Foundation constructed, owns and operates the College's first student residence, Centennial Hall. The residence was opened in 2011, constructed on land acquired by the Foundation. An expansion of Centennial Hall was completed in 2014. The Foundation also acquired "Block D" for College expansion purposes. In support of the College, the Foundation also acquired a residence in Newcomb, New York, to serve as a conference facility for the Northern Forest Institute. Funding was also provided by the Foundation to construct a new student/researcher residence at the Thousand Islands Biological Station.

Since 2002, the College Foundation has added two gift officers and two business management and accounting positions. A total of eight positions currently support development and College Foundation administration. Five of the eight positions are funded by the ESF College Foundation.

Through the ESF College Foundation, properties have continued to be acquired as investments and/or revenue-generating opportunities, with the new "ESF Legacy Forest Program" developed and launched to acquire 10,000 acres of working forest as a portfolio to provide flexible funds for Foundation growth and academic program support. Forest Properties continues to increase and diversify revenue on state-owned land.

The Office of Government Relations secured \$28 million in funding from three consecutive SUNY2020 grants. Beginning in 2013, in Round II funding for Environmental Health and Environmental Medicine, we secured \$4.5 million for equipment and ARB facilities to establish ESF's Environmental Health

program. Through Round III in 2014 we secured \$20 million to build a water research center in the Inner Harbor of Syracuse to support the College's teaching and research on Onondaga Lake. Round IV in 2015 supported a \$3.5 million SUNY 2020 award for a biomimicry laboratory in Newcomb and needed funds for IT infrastructure on the Syracuse campus.

In 2014, the Office of Government Relations secured a \$2 million SUNY Capital appropriations allocation request from the legislature to enhance the Roosevelt Wild Life Station's vertebrate collections for teaching and research.

Research expenditures have increased from \$13.4 million in 2010-11 to \$16.1 million in 2014-15.

GOAL 5: Strategically build and enhance partnerships and collaborative relationships

“ESF has enjoyed a long history of productive external relationships. Strategic partnerships and other collaborative relationships build on ESF’s strengths and leverage the strengths and needs of our partners. Developing synergistic relationships will strengthen ESF’s ability to achieve the goals outlined in the strategic plan.

In 2020, ESF provides policy makers with the peer-reviewed basic and applied science upon which natural science policy is developed. The college serves as a catalyst for economic development through mutually beneficial public and private partnerships, ensuring that science links economic vitality and environmental quality. ESF also serves the greater community by making its resources available to regional companies and academic institutions that cannot afford sophisticated analytical equipment.

Similarly, ESF’s academic programs are strengthened through strong collaborative relationships with industry, government and others that provide valuable insight into future educational needs for a productive workforce.”

Assessment of Vision 2020 Targets

Meeting/Approaching:

- Contribute the science upon which developing natural resource policy is based
- Act as a catalyst for economic development in New York (E)
- Strengthen relationships with other SUNY and private institutions (E)
- Enhance and develop continuing education programs for non-traditional students and industry (A, E)
- Establish additional external advisory councils (E)
- Strengthen and develop links with program-related industries, other educational institutions, alumni and government organizations (E)

New:

- Partner with historically black colleges and universities and institutions to develop a connection with potential students for graduate programs with an interest in environmental sciences

Recent Accomplishments/Initiatives

The ESF faculty actively contributes to their respective fields through journal publications. Publication totals for the past 5 years are: 2011 – 238 publications, 2012 – 314 publications, 2013 – 229 publications, 2014 – 268 publications, 2015 – 247 publications. Web of Science indicates that these articles (1,296 total) were cited in other publications 7,883 times.

Over the past 5 years, ESF faculty have participated in or led hundreds of workshops and training sessions to enhance and develop continuing education programs for non-traditional students and industry, especially in applied areas of research and learning and professional programs.

ESF's expanded relationships with the New York Natural Heritage Program, the New York State Department of Environmental Conservation's various ESF-centric internship programs and other such partnerships are growing, productive sets of collaboration in support of teaching and research in conservation science and sustainable management.

ESF will provide technical and engineering support of Alfred State College's Biorefinery Development and Commercialization Center, and the New Forest Economy, putting a particular focus on bioprocessing, chemistry, landscape architecture and forest management.

Departments and remote ESF campuses, such as the Adirondack Ecological Center and The Ranger School, work with a diverse group of state and federal agencies, academic institutions including school districts, private foundations and institutes, as well as industries. Conservatively, ESF has hundreds of partnerships in support of technology transfer, teaching, and research and development.

ESF is a leader in transfer student recruitment within SUNY. More than 40 percent of new ESF undergraduates enroll as transfer students because of the strong relationships developed between ESF and other institutes of higher education.

ESF continues as a founding partner of the Great Lakes Research Consortium involving 18 U.S. universities and nine Canadian affiliates and provides the Executive Director and administrative offices for this group.

At least two venture start-ups have been created by ESF faculty and one by a student, and at least 10 other students and faculty have engaged with the SUNY Research Foundation Entrepreneur in Residence program.

ESF collaborates with Upstate Medical University (UMU) and Syracuse University (SU) at the Central New York Biotechnology Accelerator and the Center of Excellence, respectively. ESF, UMU, SU and the Syracuse VA Medical Center jointly participate in the Hill Collaboration and Institute of Environmental Health and Environmental Medicine. ESF, Onondaga Community College and many regional public and private partners are working toward the creation of the Onondaga Lake Science Center.

ESF, specifically Analytical & Technical Services, has been successful in creating a partnership with Upstate Medical University, Syracuse University, Cornell, and the University of Rochester to purchase and install an 800 MHz Nuclear Magnetic Resonance Spectrometer at ESF (Jahn Lab) through a multi-user instrumentation grant from the National Institute of Health (\$2.3 million).

ESF has also developed a partnership with Upstate Medical University and Syracuse University which generated a successful National Science Foundation Multi-User Instrumentation grant for the purchase of a new Transmission Electron Microscope (\$1.6 million).

ESF offers newly developed graduate certificate programs in "Bioprocess Engineering" and "Radiation Curing" in collaboration with industrial partners; the latter is an online program.

ESF facilitated a SUNY Research Foundation 4E program of more than \$1.4 million through co-leadership and continued faculty participation.

ESF partnered with Binghamton University to develop an active program for intellectual property management.

ESF partnered with the Syracuse Center of Excellence to establish the ESF Biofuels facility to attract both researchers and start-up companies.

College alumni working for regional companies actively participate with the Career Services Office at the annual Environmental Career Fair hosted by ESF.

GOAL 6: Respond to the needs of society

“Throughout its history, ESF has addressed the needs of the natural resource and environmental professions and the public. Through outreach, continuing education, demonstration and public service, ESF faculty, staff and students share the results of their teaching, learning and scholarship with business and industry, educational institutions, government agencies and the public.

In 2020, ESF’s commitment to outreach and service remain an integral part of the college’s mission. Faculty and staff vigorously pursue new knowledge and disseminate these discoveries broadly to improve the Earth’s environmental conditions and foster the wise use of natural resources. Citizens, industry and government all benefit through programs for professionals and programs and resources for students and teachers.”

Assessment of Vision 2020 Targets

Meeting/Approaching:

- Infuse entrepreneurship into ESF’s culture
- Provide continuing education and pre-eminent curricula and materials for K-12 science teachers to help meet the national math/science initiative
- Reconfigure existing programs to be most relevant to the needs of society
- Enhance and develop new areas of research (I)
- Engage in large, national and international environmental issues (E)
- Strengthen outreach efforts (E)

Renewed/Ongoing:

- Provide business incubation opportunities on campus (E)
- Structure academic programs such that community service is a significant part of the curriculum (service learning) (S)
- Work with the local community to increase the diversity of our workforce (A)
- Implement a homeland security initiative in the area of water and air sensor development

New:

- Connect to local communities in Syracuse and Central New York to diversify outreach and improve inclusiveness with our neighbors
- Deploy programs aimed at youth in both Syracuse (Say Yes, On Point for College, and others) and New York City (SOE and others) to awaken curiosity about the natural world and increase public understanding of environmental science and sustainability

Recent Accomplishments/Initiatives

ESF in the High School annually engages nearly 700 students in 36 high schools, and with additional new and ongoing programs (e.g., ESF Science Corps Tutoring Program, ESF SCIENCE, Environmental

Challenge), continues to enrich science, technology, engineering and math (STEM) student learning and teacher professional development.

The Institute of Environmental Health and Environmental Medicine was formed as a partnership between ESF, Syracuse University and SUNY Upstate Medical. Recent research includes studying the relationship between community design and incidence of diabetes.

Green infrastructure and environmental entrepreneurship programs are being developed with partners, including Syracuse University and the U.S. Department of Agriculture Forest Service.

The Northern Forest Institute for Conservation Education and Leadership Training promotes interdisciplinary education, outreach and leadership training dedicated to enhancing the human and natural communities in the Adirondacks and Northern Forest region.

The Environmental Studies Student Organization (ESSO) is focused on addressing issues related to food recovery and waste reduction. The group transports unused perishable and prepared food from Syracuse University dining halls to local food pantries on a weekly basis.

World-class research continues to unfold at ESF, including long-standing work with blight-resistant American chestnut, international conservation biology, and renewable energy and materials.

ESF students provide more than 60,000 hours of community service per year, including focused work via the fall Saturday of Service and student-led humanitarian engineering outreach to assist the neediest communities with Engineers without Borders, the Sustainability Society Club and the ESF National Academy of Engineering Grand Challenges Scholars Program.

ESF is among the leading SUNY institutions with respect to research expenditures per faculty member. In 2015-16, \$16.7 million was expended for research with an average grant "book value" of \$60 million to 70 million annually over the past 5 years. During 2015-16, our per capita research expenditure was \$120,000, ranking ESF second in SUNY.

GOAL 7: Invest in ESF human resources and physical infrastructure

"The people comprising the ESF faculty and staff are the college's most important resource, and the campus infrastructure supports all their initiatives.

In the year 2020, ESF is home to a supportive community of workers who have numerous opportunities for professional development and are well compensated. College facilities demonstrate state-of-the-art, environmentally friendly technologies in construction and maintenance."

Assessment of Vision 2020 Targets

Meeting/Approaching:

- Promote the professional and personal development of faculty and staff
- Implement a campus physical facilities plan to include new and renovated space
- Provide wireless campus networks
- Implement a comprehensive crisis management plan
- Incorporate renewable energy resources and energy management systems
- Expand our properties contiguous to the Syracuse campus
- Develop a strategic planning assessment tool to provide the framework to measure progress

Renewed/Ongoing:

- Improve the ease of doing business; continuing process improvement
- Achieve "green campus" distinction
- Create organizational agility
- Recruit and develop faculty members from underrepresented groups in order to create a cohort of renowned diverse environmentalists (A)
- Create a climate for the development of National Academy of Science, National Academy of Engineering, and Nobel Prize Laureates (I)
- Achieve recognition in the areas of regulatory compliance and health and safety
- Develop the ability to provide seamless business services to local and distant clients
- Develop a fully automated indoor environmental control system for the campus
- ESF faculty and staff will be compensated in the top 10 percent of public-supported colleges and universities
- Implement family-supportive practices for our employees (A)

New:

- Improve and develop physical, digital and organizational systems on campus to achieve comprehensive accessibility, inclusivity and unity for all members of the ESF community

- Increase and enhance technology infrastructure, including Wi-Fi accessibility and bandwidth in teaching and learning spaces

Recent Accomplishments/Initiatives

The ESF Gateway Center was completed in 2013. This high-performance building provides a centerpiece for campus activities, explores financially feasible and technologically sound strategies to operate using renewable energy, produces its own power, demonstrates a carbon-neutral facility and conserves resources in innovative ways.

The Combined Heat and Power Plant located in the Gateway Center will provide heat and electricity to a significant portion of campus. A new controller is in the process of being installed, which will enhance operational efficiency.

The College will break ground on the Academic Research Building (ARB) in 2016. The ARB is a \$30 million project that will be adjacent to Illick and Bray Halls. It will provide a dozen modern laboratories to campus. The ground floor will include a common space where faculty, students, and staff can gather, formally and spontaneously, to discuss the issues of the day.

A \$2 million award from SUNY will be used to modernize the Roosevelt Wild Life Station's vertebrate collections, finishing out a 5,000-square-foot space in the Gateway Center where collections will be housed in a state-of-the-art facility, supporting both research and teaching.

A formal Internal Control program was implemented that exceeds the requirements of SUNY policy. ESF has always had an Internal Control program, but it lacked the formality of strong programs. We identified a resource to oversee this process so ESF is better positioned to certify the program as required each year by campus presidents.

Various training programs offered by the Office of Human Resources were expanded, including mandatory training programs added online in 2014-2015 that had 1,968 participants (or an average of 394 employees participating in five videos each).

A \$3.5 million SUNY 2020 award for a biomimicry laboratory and data center is just the first seed money for expanding our already impressive standing in biomimetics.

Planning is underway for the Onondaga Lake Science Center, a new education and research facility to be located in the Inner Harbor. It will provide a focal point for ESF research on water issues. From water chemistry to restoration ecology of lakes to conflicts that arise in a populated lake basin and from ESF research, teaching, and public outreach to partnerships with state agencies and NGOs concerned with water, this new ESF center will be a focal point for us and for the Syracuse community.

A \$190,000 SUNY grant is the first infusion of funds to create the ESF Open Academy. The Academy is conceived to extend ESF's reach and impact. It will be a digital platform where ESF can offer courses and certificates and create a new revenue stream. It will be a portal to ESF digital resources, such as the biodiversity data center, student produced videos and public science education assets. It will be an umbrella for all of ESF's outreach work, from the local area to New York City and beyond.

The Office of Human Resources is leading new efforts in succession planning to maintain a base knowledge necessary to conduct business and maintain internal controls, leadership training to aid managers at all levels within ESF, and online appointment processes.

ESF's use of Minority & Women-Owned Business Enterprises consistently ranks in the top five of SUNY schools, and we continue to achieve the increasing targets set by the Governor's Office (this 2015-16 target was raised from 20 to 30 percent).

Diversity and Inclusion

At ESF, the opportunities and needs to elevate considerations of diversity and inclusion in academic work, including the climate of the campus, is of heightened importance. ESF is developing new academic approaches and administrative structures to provide for diversity and inclusion. A new goal – Goal 8 – was developed with the *Vision 2020 Update* to help define and hold to account ESF's efforts in diversity and inclusion. While Goal 8 does hold ESF to account by a statement of a new goal and associated targets, new diversity and inclusion targets were also created across the other seven goals as part of this Vision 2020 Update.

GOAL 8: Reflect, value and promote a diverse, inclusive, responsive, collegial and collaborative institution for all students, faculty, staff, and other College stakeholders

ESF is more diverse than it was in 2003 when the Vision 2020 plan was written. This follows the national trend that shows current minority populations will soon outnumber the current majority. Given these demographic shifts, ESF must strive to be a reflection of these national changes. As the environmental concerns of this century grow, the environment will need stewards who reflect those differences in peoples across the nation. These changes provide a vast opportunity to evolve with our society while engaging and supporting a broader range of faculty, staff, students and an expanded college community.

ESF is committed to building a diverse college community that is inclusive and supportive of all people, including, but not limited to, people of all races, ethnicities, sexual orientation, gender, gender identity and expression and those undergoing transition. Also included are people of all religions, ages, abilities, socioeconomic backgrounds, veteran status, regions, nationalities, intellectual perspectives and political persuasion.

New targets

- Increase recruitment activities targeted at New York state underrepresented students utilizing on- and off-campus programs and partnerships, including promotion of EOP and CSTEP programs, partnering with local STEP chapters, community-based organizations, environmentally-focused organizations, SUNY in New York City (formerly the SUNY Center for Student Recruitment), and increasing outreach to Syracuse city schools and STEM-focused high schools throughout New York State to promote ESF as an option for STEM higher education opportunities.
- Hire a College Diversity Officer, per SUNY directive, to be in place by the fall of 2017
- Provide training in a variety of formats and engagement levels for faculty, staff and all students on diversity, inclusion and cultural competence and sensitivity issues

- Review hiring policies and procedures with an eye toward identifying applicants and new hires who demonstrate cultural competence
- Review and revise policies and facilities to ensure broader applicability and accessibility for and support of diverse populations and people of varying abilities
- Increase the involvement of ESF alumni in the CSTEP program particularly to aid current students with career development
- Increase support to students of diverse backgrounds to promote retention
- Achieve *Inclusive Excellence* and an inclusive learning environment that engages faculty, staff and students

Recent Accomplishments/Initiatives

New administrative positions and responsibilities were set in 2015, including appointments of (Interim) Chief Diversity Officer and Director of Student Diversity and Inclusion.

New communication programs and training were instituted in 2015, including redesign of Student Diversity and Inclusion website, establishing ESF student affinity groups and mentoring of faculty and staff.

Student-led conversations, programming, and activism including the Spirit and Essence Banquet, Diversity and Inclusion from the Group Up, and Diversity Week.

We are making progress in achieving a diverse student body. Students of color total a record 13 percent of ESF's undergraduate population in Fall 2015 (up from a 9 percent total in 2010). Women total a record 46 percent of undergraduate students in fall 2015 (41 percent in 2010).

A College Diversity Committee was established to provide guidance, oversight and advice to campus in matters related to diversity (interpreted broadly), with responsibility to develop a College Diversity statement, develop a College Diversity strategic plan (including communication and reporting) and enhance communications on campus-wide, diversity- and inclusion-related processes.

Aligning ESF's Vision 2020 with SUNY Excels

SUNY launched a “SUNY Excels” initiative in 2015 asking each SUNY campus to develop a 5-year plan with metrics and strategies to improve performance and achieve five system-wide goals related to Access, Completion, Success, Inquiry and Engagement. ESF responded to the call.

EXCELS PERFORMANCE GOAL 1: ACCESS

ESF will contribute to SUNY’s efforts to improve access by serving a larger and more diverse number of enrolled students, maintaining student quality and increasing faculty and staff diversity.

EXCELS PERFORMANCE GOAL 2: COMPLETION

ESF will increase its number of students completing degree programs, certificate programs and non-degree courses for credit. We will strengthen support services to help students complete their programs.

EXCELS PERFORMANCE GOAL 3: SUCCESS

ESF will position students for a successful “launch” into further education, careers, and citizenship by placing increased emphasis on applied learning, multicultural experiences, student support services, and financial literacy.

EXCELS PERFORMANCE GOAL 4: INQUIRY

ESF will define an enhanced research/inquiry agenda through its strategic planning process and will increase sponsored research by \$4 million (25 percent) by 2020.

EXCELS PERFORMANCE GOAL 5: ENGAGEMENT

ESF will share its expertise and extend the College’s economic, social and cultural impact through education, research, outreach and service. We will engage a variety of partners in New York and beyond and seek increased support from ESF alumni to accomplish this.

The five SUNY Excels goals have been aligned with ESF’s seven *Vision 2020* goals. Additionally, new strategies were developed by ESF to work toward SUNY Excels goals through 2020.

Goal to Goal – Vision 2020 Fully Aligned With SUNY Excels

SUNY Excels Goals:

ESF Goals:

	ACCESS	COMPLETION	SUCCESS	INQUIRY	ENGAGEMENT
Goal 1: Enrich academic excellence in both undergraduate and graduate education					
Goal 2: Provide an outstanding student experience					
Goal 3: Be the "go to" institution with a strong and visible reputation					
Goal 4: Become financially secure and independent					
Goal 5: Strategically build and enhance partnerships and collaborative relationships					
Goal 6: Respond to the needs of society					
Goal 7: Invest in ESF human resources and physical infrastructure					
Goal 8: Reflect, value and promote a diverse, inclusive, responsive, collegial, and collaborative institution for all students, faculty, staff and other college stakeholders					

New Strategies to Meet SUNY Excels

A substantial number of strategies were developed by ESF to better meet SUNY Excels over the next 5 years.

ACCESS

- Implement “3+1” Bachelor of Science program with Beijing University of Chemistry Technology
- Add non-thesis masters programs
- Recruit additional full-time doctoral students
- Enroll 1,000 part-time students studying online through Open Academy
- Launch a branding and national visibility campaign
- Continue to increase out-of-state student recruitment
- Implement targeted strategies to recruit diverse students
- Appoint a Chief Diversity Officer
- Implement recommendations from SUNY’s Diversity Task Force
- Expand the ESF in the High School program online through the new Open Academy
- Develop online certificate programs for part-time/adult learners
- Improve course scheduling and optimize use of facilities
- Improve affordability by adding ESF auxiliary dining services

COMPLETION

- Implement Degree Works academic advising software
- Fully adopt SUNY’s “Seamless Transfer” policies
- Provide online courses to enhance scheduling options
- Develop online certificate programs to encourage more completions
- Increase on-campus housing to meet demand
- Explore potential to offer a “self-designed” degree program

SUCCESS

- Continue to offer all students opportunities for applied learning
- Re-establish a learning community program
- Increase efforts to provide multicultural experiences
- Examine general education requirements related to other cultures
- Provide more student support services “in house” rather than through Syracuse University
- Promote financial literacy and reduce student loan default rates

INQUIRY

- Increase collaboration in SUNY-sponsored research partnerships
- Construct ARB and Onondaga Lake Science Center
- Establish Biomimicry Data Center and improve campus IT infrastructure
- Update ESF's research agenda and identify related faculty hiring priorities

ENGAGEMENT

- Expand the ESF in the High School program through online courses
 - Seek continued grant support for K-12 outreach
 - Look for additional START-UP NY partners
 - Increase recognition of ESF alumni
 - Increase alumni involvement in student recruitment and career mentoring
 - Build ESF's next development campaign based on our strategic plan
 - Increase alumni participation in giving
-

President's Perspectives on ESF's Future Initiatives

As President, my top priority is the continued success of ESF and its students. To achieve that goal, it is imperative to diversify and increase available resources, adapt to changing circumstances, modernize and improve infrastructure, and continually improve a uniquely excellent student experience. The College will continue to pursue initiatives that build upon current and traditional ESF strengths, seize opportunities as they arise and take deliberate steps to position us to meet emerging needs and recognize opportunities on the horizon. We will emphasize those areas where ESF can make contributions that are unique or done uniquely well. We will gauge our success by our impacts on students, science, engineering, management, design, scholarship, society and the environment. In addition to the other priorities outlined in this document, additional clear and present opportunities for impact include the following general areas for which ESF has, or will establish programs, centers or institutes.

Excellence and Inclusion in Education: ESF is privileged to educate environmental leaders of tomorrow. As the top-ranked environmental college in the country, ESF maintains an exceptional atmosphere of discovery and learning reinforced by access to faculty possible only on a small campus combined with the creative drive of a doctoral degree-granting, research-intensive campus. Creating opportunities for students to gain hands-on experience through team or independent research, internships, international travel and other experiential means is well established and expanding at ESF. As an environmental leader, ESF also accepts a responsibility for communicating knowledge to the public, learning about the needs of decision-makers on the ground, increasing public science literacy and broadening participation in STEM majors. I envision a campus community continuing to be rich and diverse in perspectives; a community that welcomes, challenges and supports all joining it.

Relationship of Humans to Environment: Deeper understanding of the complex and diverse kinds of relationships between humans and the environment – natural and built – is as critically important as is communication of nuanced knowledge to the public; and, as the population becomes increasingly urban, and children spend more time in a virtual rather than natural world, these needs will become even more acute. Examples of the College's exploration of human-environment relationships include the Center for A New American Environmentalism, Center for Native Peoples and the Environment, Center for Cultural Landscape Preservation, Center for Community Design Research, Institute for Environmental Health and Environmental Medicine, and a center focused on urban infrastructure. We will further explore Traditional Ecological Knowledge, ecological literacy, and realize an elevated focus on issues of environmental health and environmental justice. ESF will continue to invest in a community of scholars curious about nature, humans and all aspects of the well-being and interactions between the two.

Nature-Inspired Design: ESF has a long history of using knowledge of natural processes, ecosystems, animals, plants and microbes to discover more efficient and sustainable ways to meet human needs. Examples of nature-inspired solutions can be found from chemistry and landscape architecture to sustainable construction and forest management. Gaps in the national capacity to realize the full potential of biomimicry to solve problems present an enormous opportunity for a creative fusion of scientific natural history, taxonomy, field biology, design, biodiversity informatics and what might be

termed “evolutionary entrepreneurship.” ESF has impressive strengths in natural history, organismal biology and nature-inspired design and, thus, is well positioned to play a leadership role. ESF will play a role in the creation of an “adaptation” or circular economy that constantly improves the efficiency and sustainability of human industry by translating knowledge of evolutionary adaptations of organisms and natural systems into ever-improving designs, processes, materials and products.

Adapting to a Changing World: A growing human population, atmospheric warming and a host of human practices are contributing to rapid global environmental changes that threaten human welfare, ecosystem functions and biological diversity. It is imperative that we detect, monitor and creatively adapt to such changes. For instance, rather than accept the decline and extinction of a key North American forest species induced by a human-introduced pathogen, ESF’s American Chestnut Research and Restoration Project has created a path to the species’ recovery. In addition, ESF’s approximately 25,000 acres of forests, field stations and research sites has the capacity to become an ecological, biodiversity and climate change observatory for New York and beyond. I see ESF capable of forecasting, and helping communities adapt to environmental change with the goal of increasing the quality of human life, while also conserving the integrity of the natural world.

Scientific Natural History: Observational and descriptive studies of individual species, comparative studies among species, studies of the complex networks of organisms in ecosystems, and understanding the interplay of biotic and abiotic factors in the biosphere create fundamental knowledge essential to the life sciences. As Walter Tschinkel and E. O. Wilson recently wrote in an article in *BioScience*, “With most species yet undiscovered and the vast majority of those known yet unstudied, most biological phenomena are probably also unknown and unimagined.” Closing this knowledge gap requires renewed emphasis on taxonomy, autecology, biogeography, phylogenetic systematics and biodiversity informatics. Projections that we have entered the early days of a sixth mass extinction event add urgency to exploration of biodiversity. ESF is uniquely positioned to contribute to the growth of knowledge of the biosphere and its origin, evolution and organization.

Solutions-Inspired Discovery and Collaboration: ESF is a leader in translating scientific knowledge into effective policy. Our long-term monitoring of effects of acid precipitation was the foundation for a national response to this pollution source, and ESF is poised today to address threats of rapid climate and environmental change. ESF has an unmatched tradition of driving solutions for such environmental challenges. From the recovery of New York’s forests in the 20th century, the restoration of Onondaga Lake and the return of the American chestnut to improved processes for the paper and pulp industry, development of biomass alternative fuels and advancement of natural products chemistry — to name only a few — ESF has an extraordinary track record of making discoveries leading to creative solutions, and doing so in cooperation with industry, government, NGOs, and sister academic institutions. This problem-solving determination and collaborative spirit will continue to be expressed in many forms at the College. ESF has a community of scientists, engineers, communicators, managers, designers, planners, policy experts, and scholars who will continue to create and apply fundamental scientific knowledge to solve great problems of the environment, science and society.

What Next?

Starting in the 2017-2018 academic year, ESF will begin a full effort in strategic planning in order to replace *Vision 2020* and this *Update*. Assessments of ESF's strengths, weakness, opportunities and threats (classic S.W.O.T analyses) will be conducted for each unit and department, with these joined to produce a new, strategic understanding of the College. Stakeholders both internal and external to ESF, including alumni and other partners, will be fully and formally engaged in the planning process. A broadly shared understanding of the priority issues that need to be resolved by ESF will be developed, along with the capacities and limitations that will control levels of resolution. Together ESF and its stakeholders will devote the time and intellect necessary to identify and implement the best path for the College beyond 2020.

In updating *Vision 2020*, it became evident that ESF might need to develop new goals related specifically to the graduate student experience and the research enterprise. Community-based information was not available for this *Update* to support these new goals. This information can only come with the future strategic planning.

Additionally, the College is embarking on two new areas of philosophical and principled need and challenge: sustainability, and diversity and inclusion. While both of these are covered to some extent in the *Vision 2020 Update*, it is expected that the new College-wide committees – the Sustainability Committee and the College Diversity Committee – will do much with regard to planning and action at ESF, and set the stage for this to be fully accounted for in a new ESF strategic plan that will fully replace *Vision 2020* and this *Update* in the Year 2021.

It is expected that much new input will come over the next few years to guide ESF beyond 2020, and that this will put ESF in good stead with those full strategic planning efforts that are slated to occur from 2017 to 2020.

Acknowledgements and Recognitions

2015-2016 Strategic Planning Steering Committee¹

2015 Committees on Transdisciplinary Questions

What are the relationships between humans and the environment?

What are earth's species dynamics?

How can we meet human needs while conserving the environment?

How can we adapt to changing environments?

2015 Planning Committees

The Undergraduate Experience

Organization

ESF Office of Communications

Contributions included: website construction and maintenance, including the development of a new banner; development of a graphic for planning and updating used in flyers and posters; and editing the first and third drafts of the Update.

2015-2016 Unit and Department Reports on recent accomplishments, goals and differentiators (at the behest of the SPSC)

ESF Newcomb Campus – Adirondack Ecological Center; Business Office; Department of Chemistry; Office of Communications; Department of Environmental and Forest Biology; Department of Environmental Studies; Department of Environmental Resources Engineering; Department of Forest and Natural Resources Management; Forest Properties; Honors Program; Human Resources; Department of Landscape Architecture; Moon Library; Office of Athletics; Office of Financial Aid and Scholarships; Office of Instruction and Graduate Studies; Office of Outreach; Office of Research Programs; Office of Undergraduate Admissions; Department of Paper and Bioprocess Engineering; ESF Wanakena Campus – The Ranger School; Student Affairs Division; University Police Department; and Writing Program.

Bibliography of documents used in the *Vision 2020 Update*

Diversity and Inclusion from the Ground Up, December 2015

ESF Strategic Planning Document, May 7, 2015

¹ Strategic Planning Steering Committee members (alphabetical): Scott Bergey, Kelley Donaghy, Maureen Fellows, Margaret Foley, Bob French, Brenda Greenfield, Richard Hawks, Mark Lichtenstein, Anne Lombard, Valerie Luzadis, Chris Nowak (Committee Chair), Neil Ringler, Joe Rufo, Sue Sanford, Chuck Spuches, Scott Shannon, Art Stipanovic and John View

ESF Unit and Department reports 2015-2016 – recent accomplishments, goals and aspirations, and differentiators.

FOUNDATIONS FOR A SECOND CENTURY, ESF's Strategic Plan, Fall 2015 (Version 1: 9/15//15)

Middle States Reaccreditation, 2011 Self-study Challenges and Recommendations

Middle States Reaccreditation, AY 12/13 SUNY-ESF College-wide Metrics

Middle States Reaccreditation, Advancing Sustainability at ESF, A Selected Topics Self-Study for MSCHE Reaccreditation, October 2011

SUNY Excels 2015 Performance Improvement Plan, Attachment 1: Narrative

SUNY Excels: Date Executive Summary, January 2016 (presented in "Envir Sci Forestry SUNY Excels Data Summary Graph and Detail Tables_Final.xlsx")

Transdisciplinary Question #1: What are the relationships between humans and the environment? Committee report dated March 2015

Transdisciplinary Question #2: What are earth's species and dynamics? Committee report dated March 2015

Transdisciplinary Question #3: How can we meet human needs while conserving the environment? Committee report dated March 2015

Transdisciplinary Question #4: How can we adapt to changing environments? Committee report dated March 2015

Undergraduate Strategic Planning Committee Report, March 2015

Vision 2020, SUNY COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY, circa 2003
